

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): An antibody or fragment thereof that binds with high binding affinity to a YYX epitope of a mammalian PrP^{Sc}.

Claim 2 (currently amended): The antibody of claim 1, wherein said antibody does not ~~substantially bind~~ specifically bind PrP^C.

Claim 3 (original): The antibody of claim 1, wherein said antibody binds to a YYR epitope of a mammalian PrP^{Sc}.

Claim 4 (original): The antibody of claim 1, wherein said antibody is a polyclonal antibody generated against a YYR epitope of PrP^{Sc}.

Claim 5 (original): The antibody of claim 4, wherein said YYX epitope is part of CYYR (SEQ ID NO: 32).

Claim 6 (original): The antibody of claim 1, wherein said antibody is a monoclonal antibody generated against a YYR epitope of PrP^{Sc}.

Claim 7 (original): The antibody of claim 6, wherein said YYR epitope is part of CYYRRYYRYY (SEQ ID NO: 33).

Claim 8 (original): The antibody of claim 1, wherein said antibody is an IgG, IgM, IgE, IgD, or IgA.

Claim 9 (original): The antibody of claim 1, wherein said antibody fragment is a Fab or Fv fragment.

Claim 10 (original): A hybridoma cell line that produces a monoclonal antibody that binds with high binding affinity to a YYX epitope of a mammalian PrP^{Sc}.

Claim 11 (currently amended): The hybridoma of claim 10, wherein said antibody does not ~~substantially bind~~ specifically bind PrP^C.

Claim 12 (original): The hybridoma cell line of claim 10, wherein said antibody binds to a YYR epitope of a mammalian PrP^{Sc}.

Claim 13 (original): The hybridoma cell line of claim 12, wherein said YYR epitope is part of CYYRRYYRYY (SEQ ID NO: 33).

Claim 14 (original): A composition comprising the antibody of claim 1.

Claim 15 (original): The composition of claim 14, wherein said composition further comprises a carrier.

Claim 16 (original): The composition of claim 14, wherein said composition is a therapeutic composition.

Claim 17 (original): An immunological test kit comprising the antibody of claim 1 and a means for detecting said antibody.

Claim 18 (withdrawn): A method for detecting PrP^{Sc} in a biological sample, said method comprising the steps of:

(a) contacting said biological sample with the antibody of claim 1 under conditions that allow for complex formation between said antibody and PrP^{Sc}; and

(b) detecting said complexes as an indication that PrP^{Sc} is present in said biological sample.

Claim 19 (withdrawn): The method of claim 18, wherein said antibody does not substantially bind PrP^C.

Claim 20 (withdrawn): The method of claim 18, wherein said antibody is a polyclonal antibody or fragment thereof.

Claim 21 (withdrawn): The method of claim 18, wherein said antibody is a monoclonal antibody or fragment thereof.

Claim 22 (withdrawn): The method of claim 18, wherein said biological sample comprises a tissue or cell, a tissue or cell extract, a bodily fluid, or a biopsy.

Claim 23 (withdrawn): The method of claim 18, wherein said PrP^{Sc} is from a human, a livestock species, or a pet species.

Claim 24 (withdrawn): The method of claim 18, wherein said complex is detected using an ELISA, RIA, western blotting, immunoprecipitation, or flow cytometry.

Claim 25 (withdrawn): A method for treating or preventing a PrP^{Sc} disease in a mammal, comprising administering to said mammal an effective amount of the antibody of claim 1 in a pharmaceutically-acceptable carrier.

Claim 26 (withdrawn): A peptide comprising a YYX, YYR, YYD, or YYQ amino acid sequence, said peptide having antigenicity as a PrP^{Sc}.

Claim 27 (withdrawn): The peptide of claim 26, wherein said peptide is composed of 18 or fewer amino acids.

Claim 28 (withdrawn): The peptide of claim 26, wherein said peptide is composed of 12 or fewer amino acids.

Claim 29 (withdrawn): The peptide of claim 26, wherein said peptide is composed of 8 or fewer amino acids.

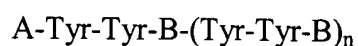
Claim 30 (withdrawn): The peptide of claim 26, wherein said peptide is composed of 5 or fewer amino acids.

Claim 31 (withdrawn): The peptide of claim 26, wherein said peptide is fused to an immunogenic carrier.

Claim 32 (withdrawn): The peptide of claim 26, wherein said immunogenic carrier is serum albumin, ovalbumin, keyhole limpet hemocyanin, 8map, or lysozyme.

Claim 33 (withdrawn): The peptide of claim 26, wherein said peptide is the tripeptide having the amino acid sequence YYR.

Claim 34 (withdrawn): A synthetic peptide having the formula:



wherein A is either any amino acid or is absent;

wherein B is either any amino acid or is absent; and

wherein n is from 0 to 10, inclusive.

Claim 35 (withdrawn): The peptide of claim 34, wherein at least one of A and B is not Tyr.

Claim 36 (withdrawn): The peptide of claim 34, wherein A or B are chosen from Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn, Pro, Gln, Arg, Ser, Thr, Val, or Trp.

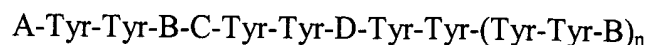
Claim 37 (withdrawn): The peptide of claim 34, wherein said peptide is A-Tyr-Tyr-Arg (SEQ ID NO: 12) or a pharmaceutically acceptable salt thereof.

Claim 38 (withdrawn): The peptide of claim 34, wherein said peptide is A-Tyr-Tyr-Gln (SEQ ID NO: 13) or a pharmaceutically acceptable salt thereof.

Claim 39 (withdrawn): The peptide of claim 34, wherein said peptide is A-Tyr-Tyr-Asp (SEQ ID NO: 14) or a pharmaceutically acceptable salt thereof.

Claim 40 (withdrawn): The peptide of claim 34, wherein said peptide is linked to an immunological carrier.

Claim 41 (withdrawn): A synthetic peptide having the formula:



wherein A is either any amino acid or is absent;
wherein B is either any amino acid or is absent;
wherein C is either any amino acid or is absent;
wherein D is either any amino acid or is absent; and
wherein n is 0 to 10, inclusive.

Claim 42 (withdrawn): The peptide of claim 41, wherein at least one of A, B, C, and D is not Tyr.

Claim 43 (withdrawn): The peptide of claim 41, wherein A, B, C, or D are chosen from Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn, Pro, Gln, Arg, Ser, Thr, Val, or Trp.

Claim 44 (withdrawn): The peptide of claim 41, wherein A is Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn, Pro, Gln, Arg, Ser, Thr, Val, or Trp, and B, C, and D are chosen from Arg, Gln, Asp, Glu, Phe, or Trp.

Claim 45 (withdrawn): The peptide of claim 41, wherein said peptide is A-Tyr-Tyr-Arg-Arg-Tyr-Tyr-Arg-Tyr-Tyr (SEQ ID NO: 25) or a pharmaceutically acceptable salt thereof.

Claim 46 (withdrawn): The peptide of claim 41, wherein said peptide is linked to an immunological carrier.

Claim 47 (withdrawn): A method for generating an antibody that binds with high binding affinity to a mammalian PrP^{Sc}, said method comprising the steps of:

- (a) providing a prion protein peptide comprising an accessible epitope having two or more amino acid side chains;
- (b) immunizing a mammal with said prion protein peptide of step (a); and
- (c) purifying said antibody from a tissue of said mammal or from a hybridoma made using said tissue.

Claim 48 (withdrawn): The method of claim 47, wherein said antibody does not substantially bind PrP^C.

Claim 49 (withdrawn): The method of claim 47, wherein said antibody is a polyclonal antibody or fragment thereof.

Claim 50 (withdrawn): The method of claim 47, wherein said antibody is a monoclonal antibody or fragment thereof.

Claim 51 (withdrawn): The method of claim 47, wherein said prion protein peptide comprises a YYX amino acid sequence.

Claim 52 (withdrawn): The method of claim 51, wherein said prion protein peptide comprises a YYR or YYQ or YYD amino acid sequence.

Claim 53 (withdrawn): The method of claim 47, wherein said prion protein peptide is composed of 18 or fewer amino acids.

Claim 54 (withdrawn): The method of claim 47, wherein said prion protein peptide is composed of 12 or fewer amino acids.

Claim 55 (withdrawn): The method of claim 47, wherein said peptide is composed of 8 or fewer amino acids.

Claim 56 (withdrawn): The method of claim 47, wherein said peptide is composed of 5 or fewer amino acids.

Claim 57 (withdrawn): The method of claim 47, wherein said prion protein peptide comprises the peptide of claim 34 or claim 41.

Claim 58 (withdrawn): A vaccine against a PrP^{Sc} disease comprising a peptide of any one of claims 26, 34, or 41 and a pharmaceutically-acceptable carrier.

Claim 59 (withdrawn): A method of immunizing a mammal against a PrP^{Sc} disease, comprising administering an effective amount of the vaccine of claim 58.

Claim 60 (withdrawn): A composition comprising the peptide of any of claims 26, 34, or 41.

Claim 61 (withdrawn): The composition of claim 60, wherein said composition is a therapeutic composition.

Claim 62 (withdrawn): A method for decontaminating PrP^{Sc} from a biological sample, said method comprising the steps of:

- (a) treating the biological sample with an antibody of claim 1 for a period of time sufficient to permit the formation of an anti-PrP^{Sc} antibody:PrP^{Sc} complex; and
- (b) recovering said anti-PrP^{Sc} antibody:PrP^{Sc} complex from said biological sample.

Claim 63 (withdrawn): The method of claim 62, wherein said biological sample is a tissue, bodily fluid, or organ.

Claim 64 (withdrawn): The method of claim 62, wherein said biological sample is perfused with said antibody

Claim 65 (withdrawn): A method of inhibiting PrP^{Sc} in a biological sample, said method comprising:

treating the biological sample with an antibody of claim 1 for a period of time sufficient to permit the formation of an anti-PrP^{Sc} antibody:PrP^{Sc} complex.

Claim 66 (withdrawn): The method of claim 65, wherein said biological sample is a bodily fluid, a tissue or organ.

Claim 67 (withdrawn): The method of claim 65, wherein said biological sample is perfused with said antibody.

Claim 68 (withdrawn): A method for identifying a candidate compound for the treatment of a prion disease, said method comprising:

(a) measuring the binding of an anti-YYX antibody to PrP^{Sc} in the presence of a test compound; and

(b) measuring the binding of said anti-YYX antibody to PrP^{Sc} in the absence of said test compound;

wherein a level of binding of said anti-YYX antibody to PrP^{Sc} in the presence of said test compound that is less than the level of binding of said anti-YYX antibody to PrP^{Sc} in the absence of said test compound is an indication that said test compound is a potential therapeutic compound for the treatment of a prion disease.

Claim 69 (withdrawn): The method of claim 68, wherein the anti-YYX antibody is an anti-YYR antibody, anti-YYD antibody, or an anti-YYQ antibody.

Claim 70 (withdrawn): The method of claim 68, wherein said prion disease affects a human, a livestock species, or a pet species.

Claim 71 (withdrawn): The method of claim 68, wherein said prion disease affects a human, bovine, sheep, or goat.

Claim 72 (withdrawn): The method of claim 68, wherein said test compound is a small molecule.

Claim 73 (withdrawn): A compound identified according to the method of claim 68.

Claim 74 (withdrawn): A method for identifying a compound for diagnosing a prion disease, said method comprising:

(a) measuring the binding of an anti-YYX antibody to PrP^{Sc} in the presence of a test compound; and

(b) measuring the binding of said anti-YYX antibody to PrP^{Sc} in the absence of said test compound;

wherein a level of binding of said anti-YYX antibody to PrP^{Sc} in the presence of said test compound that is less than the level of binding of said anti-YYX antibody to PrP^{Sc} in the absence of said test compound is an indication that said test compound is a potential compound for diagnosing a prion disease.

Claim 75 (withdrawn): The method of claim 74, wherein the anti-YYX antibody is an anti-YYR antibody, anti-YYD antibody, or an anti-YYQ antibody.

Claim 76 (withdrawn): The method of claim 74, wherein said prion disease affects a human, a livestock species, or a pet species.

Claim 77 (withdrawn): The method of claim 74, wherein said prion disease affects a human, bovine, sheep, or goat.

Claim 78 (withdrawn): The method of claim 74, wherein said test compound is a small molecule.

Claim 79 (withdrawn): A compound identified according to the method of claim 74.

Claim 80 (original): An antibody produced according to the method of claim 47.

Claim 81 (new): The antibody of claim 1, wherein said antibody selectively binds PrP^{Sc} as compared to PrP^C.

Claim 82 (new): The hybridoma of claim 10, wherein said antibody selectively binds PrP^{Sc} as compared to PrP^C.